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ABSTRACT

A study analyzed student outcomes at those schools and colleges that filed reports with the Accrediting Commission of Career Schools/Colleges of Technology during the 1993 school year. It also compared these data to information collected in 1990, 1991, and 1992. The study focused on the following outcomes calculated separately for full- and part-time students: graduation, withdrawal, training-related placement, and default on Federal Family Educational Loans. The performance of the institutions was highly consistent over the 4 years. Almost two-thirds of the full-time students graduated, and three-fourths were placed in training-related jobs. The graduation rate of part-time students was slightly more than one-half, and two-thirds were placed in training-related jobs. Default rates were fairly consistent at about one-fourth of the students leaving school. Multiple-regression analysis of the relationships of the 4 outcomes studied to 27 measures of the schools' characteristics confirmed that the following program characteristics have consistent, statistically significant relationships with school performance: total enrollment, main or branch campus, dual accreditation, separate facilities, percentage of students receiving financial aid, average program length, faculty turnover, and percentage of students classified as "Ability to Benefit" students. (Technical notes regarding study definitions and formulas are included. Eleven sources for comparison statistics are listed.) (YLB)

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ED 379 492

# Student Outcomes at Private, Accredited Career Schools and Colleges of Technology

## An Analysis of the Effects of Selected School/College Characteristics on Student Outcomes for School Years 1990 through 1993

Prepared for

The Accrediting Commission of Career Schools and Colleges of Technology

by

Morgan V. Lewis

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February 1995

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# Contents

Foreword ..... i

Introduction ..... 1

Outcomes ..... 3

Characteristics Related to Graduation ..... 7

Characteristics Related to Withdrawal ..... 13

Characteristics Related to Training-Related Placement ..... 18

Characteristics Related to Default ..... 19

Comparisons with Similar Programs ..... 24

Technical Notes ..... 26

## FOREWORD

The Center on Education and Training for Employment is pleased to submit this report to the Accrediting Commission of Career Schools and Colleges of Technology (ACCSCT). Private postsecondary institutions play a major role in providing the training needed for an economy with an ever-increasing demand for technical skills. The Accrediting Commission is charged with ensuring that the training provided by these schools adheres to the standards it has established.

One of the methods the Commission uses to carry out its responsibilities is to require each school to submit an Annual Report. The information in this report enables the Commission to monitor a school's operation and performance.

The data from the annual reports filed by all the accredited schools and colleges for the school years 1990 through 1993 were the basis for this report. The results contained in this report represent a summary of the major findings from a technical report prepared for the Commission. Those findings are presented in this report in a nontechnical manner.

The report was prepared by Dr. Morgan Lewis, Research Scientist. Michael Mustaine and Lynette Spring performed the many computer runs necessary for the analysis. Dr. Lewis has asked me to express his appreciation to those who contributed in many ways in the preparation of this report:

First, to the Accrediting Commission for funding the analyses and verification of the Annual Report data.

Second, to the staff of the Accrediting Commission -- particularly Thomas Kube, Bruce Jenks, Patricia Barkeloo, and Marjorie Hackett -- who are responsible for the collection and processing of the Annual Report data upon which the report is based.

Third, to Dr. Kevin Hollenbeck of the Upjohn Institute for Employment Research, Kalamazoo, Michigan, and Dr. N. L. McCaslin of The Ohio State University, who reviewed the definitions of outcome measures developed for the technical report.

And fourth, to the members of the Accrediting Commission themselves, who contributed many helpful suggestions and insights regarding definitions, analyses, and interpretations of the findings, while allowing Dr. Lewis full control over the final contents of this report.

I should add that although the Accrediting Commission provided the funding for the preparation of this report, its findings and conclusions are those of Dr. Lewis and not necessarily those of the Accrediting Commission or our Center.

Ray D. Ryan
Executive Director
Center on Education and Training for Employment

# Introduction

The Accrediting Commission of Career Schools and Colleges of Technology (ACCSCT) requires annual reports of its member institutions. This report provides an independent analysis of the 1993 annual report data from the schools and colleges and a comparison of these data to data collected in 1990, 1991, and 1992. It sheds light on five critical questions:

> What are the characteristics of currently ACCSCT-accredited colleges schools and colleges?
>
> How are ACCSCT schools performing in terms of graduation, completion, training-related placement, and loan default?
>
> What trends can be detected in school performance?
>
> What characteristics are associated with ACCSCT school performance?
>
> What can be done to improve ACCSCT school performance?

The 1993 reports were from 920 schools and colleges with average enrollments of 419 full-time and 98 part-time students. The schools and colleges, located in 49 states and Puerto Rico, are state-licensed, private postsecondary institutions offering trade and technical programs. Over the four years of reporting (1990-1993), the number of schools has ranged from 920 to 1,062 and the average enrollments from 410 to 420 full-time and 98 to 124 part-time students.

This report focuses on three outcomes, which were calculated separately for full-time and part-time students:

- Graduation rates
- Withdrawal rates
- Training-related placement rates

The analysis also examined the default rate on Federal Family Educational Loans for students who had left these schools two years prior to the year of the annual report. The ways in which these rates were calculated are presented in the "Technical Notes" section.

A statistical technique known as multiple regression analysis was used to study the relationship between these outcomes and various school characteristics; e.g., total enrollment, type of school (main or branch), accreditation (single or dual), availability of separate facilities, percentage of students receiving financial aid, average program length, and faculty turnover. By controlling the characteristics for which we have measures, the technique estimates the unique relationship of each characteristic to school performance. It is important to note that this analysis shows only relationships, not cause and effect.

Those characteristics that were found to have consistent, significant relationships with the outcomes for full-time students are summarized in this report. There were fewer significant relationships for part-time enrollments, but the overall patterns were virtually identical to those found for the full-time results.

## Outcomes

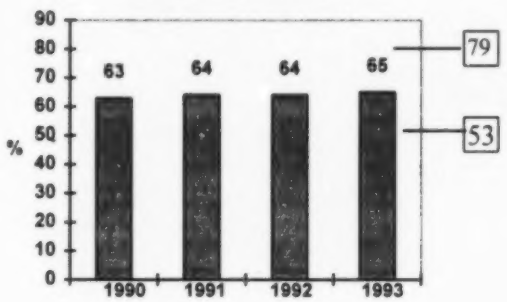
The performance of the accredited institutions has been highly consistent over the four years examined.

### *Graduation Rates*

The number of students graduating each year is presented as a percentage of the total number of students leaving school through graduation and withdrawal.

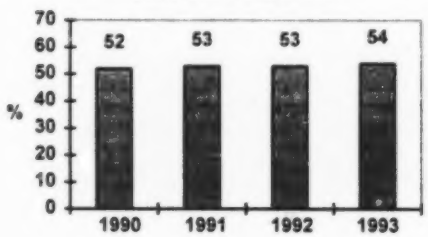
The full-time bar for 1993 has a band which indicates the range of graduation rates for the middle 50 percent of schools. Schools with rates below 53 are the lowest 25 percent. Schools with rates above 79 are the highest 25 percent. Similar ranges are shown for the other full-time outcome measures.

**Graduation Rate**
**Full-Time Students**




Almost two-thirds of the full-time students graduated.

**Graduation Rate**
**Part-Time Students**

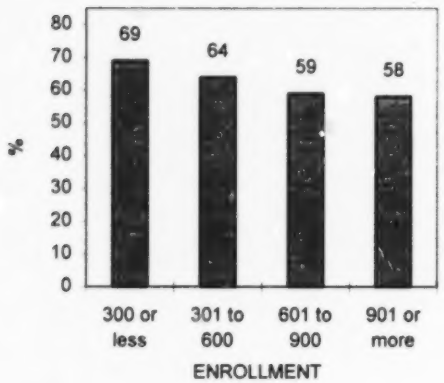



The graduation rate of part-time students for each year was slightly more than one-half.

*Graduation Rates (continued)*

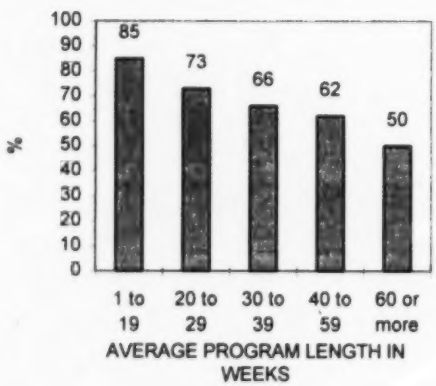
The 1993 full-time graduation rates were compared across schools with different enrollments and different average length of programs.

**Graduation Rates Comparison at Different Enrollment Levels**




Graduation rates were higher in schools with 600 or fewer full-time students.

**Graduation Rates at Different Average Program Lengths in Weeks**

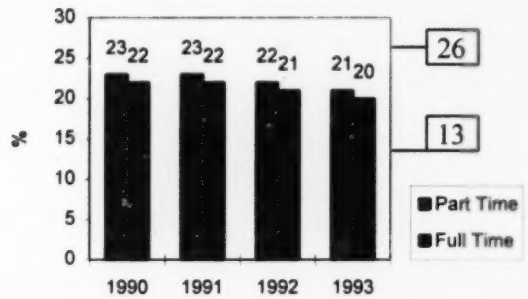



Graduation rates were higher at shorter program lengths.

### *Withdrawal Rates*

The number of students withdrawing is presented as a percentage of the total number of students enrolled. The full-time bar for 1993 has a band which indicates the range of withdrawal rates for the middle 50 percent of schools. Schools with rates below 13 percent are the lowest 25 percent. Schools with rates above 26 are the highest 25 percent.

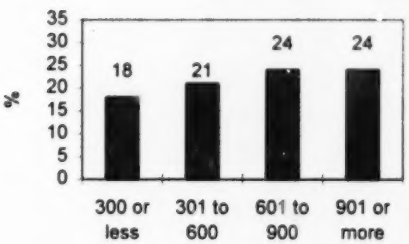
**Withdrawal Rates**




Withdrawal rates were consistent for both full and part-time students over the four years.

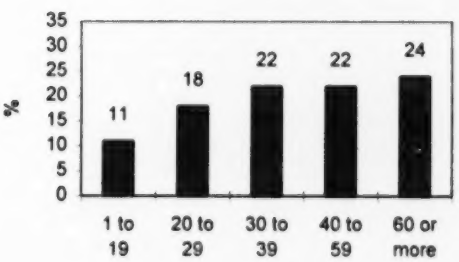
Enrollment and average program length are associated with withdrawal rates just as they are with graduation rates. As enrollment and average program length increased, withdrawal rates also increased.

**Withdrawal Rates at Different Full-time Enrollment Levels**




Withdrawal rates were lower in schools with fewer than 600 students.

**Withdrawal Rates at Different Program Lengths**

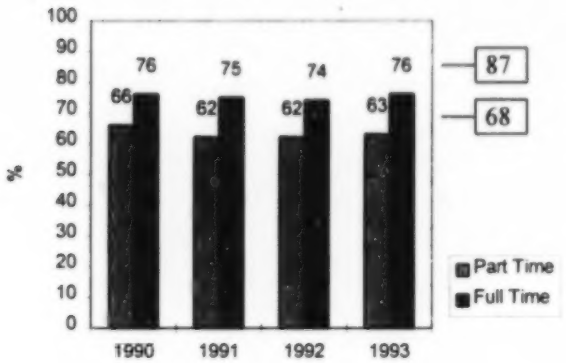



Withdrawal rates were lower in shorter programs.

### *Training-Related Placement Rates*

The number of graduates who obtained jobs related to the fields they had studied is presented as a percentage of the total number of graduates who sought employment. Total enrollment and average length of programs did not have strong relationships with either training-related placement or default rates. The full-time bar for 1993 has a band which indicates the range of training-related placement rates for the middle 50 percent of schools. Schools with rates below 68 percent are the lowest 25 percent. Schools with rates above 87 percent are the highest 25 percent.

**Training-Related Placement Rates**

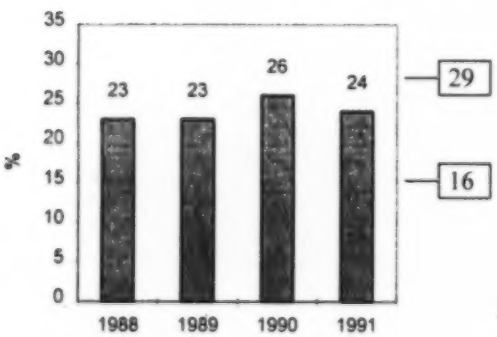



Three quarters of full-time and two thirds of part-time students who graduated were placed in training-related jobs.

### *Default Rates*

The default rate on Federal Family Educational Loans (FFEL) was examined for those students who had left their schools and colleges two years prior to the years being analyzed. Federal Family Educational Loans are guaranteed by the federal government and are available to all students who need them. These loans are not limited to students from disadvantaged circumstances. The bar for 1993 has a band which indicates the range of default rates for the middle 50 percent of schools. Schools with rates below 16 percent are the lowest 25 percent. Schools with rates above 29 are the highest 25 percent.

**Default Rates**




Default rates were fairly consistent at about one-fourth of the students leaving school for each of the four years examined.

## Characteristics Related to Graduation

The figures that follow present the school characteristics that were related to graduation rates for at least two of the four years examined. The height of each bar reflects the characteristics' effects on graduation rates. Years in which a school characteristic did not have a significant effect on an outcome are indicated by the letters NS (not significant).

The measures of school characteristics are of two kinds: categorical and continuous.

- Categorical variables reflect either-or conditions. A school is either a main school or a branch school. A school is either accredited by an agency in addition to the Accrediting Commission or it is not. Categorical variables are interpreted in comparison to the opposite condition.

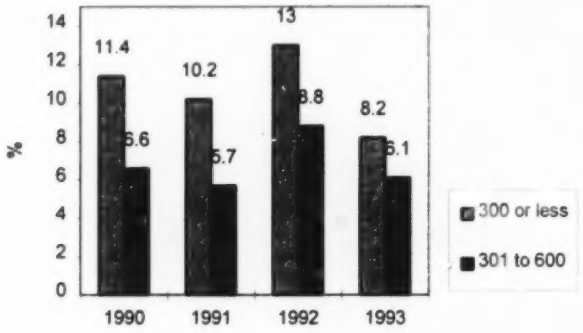
- Continuous variables can have many values. Most of the continuous variables in the figures throughout the rest of this report reflect the percentage of students with certain characteristics (e.g., those receiving different types of financial aid). These percentages are based on the total enrollment of the individual schools.

In these charts, a unit is typically a change of one percentage point; for example, an increase of one point in the percentage of students receiving Pell grants, or an increase of one point in the faculty turnover rate. The effects of these unit changes on the outcome variables are always less than one full percentage point. Therefore, for illustrative purposes, the charts show the effects of a ten-unit change in the school characteristic variables on outcome variables.

### *Total Enrollment Categories*

The enrollment groupings shown in the following figures are categorical variables of a special sort. The schools with 300 or less, 301-600, and 601 to 900 students are compared to schools in the largest enrollment group of 901 or more students.

**Net Effect of Enrollment Levels on Graduation Rates**



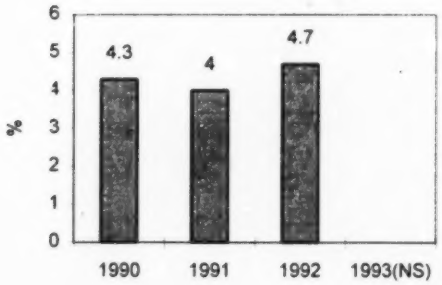

For all four years, schools with enrollment of 300 or less and 301 to 600 had higher graduation rates than did schools with enrollments of 901 or more.

It bears repeating that these estimates of the effect of enrollment size are independent of the other variables that influence graduation rates. In 1993, when the effect of other school characteristics (e.g., percentage of Pell recipients and average program length) were controlled, schools with enrollments of 300 or less had graduation rates 8 percentage points higher than did schools with enrollments 901 or more.

### *Main or Branch School*

About four-fifths of the ACCSCT-accredited schools are main schools, the remainder being branches of the main schools..

**Net Effect of Main Schools Compared to Branch Schools On Graduation Rates**

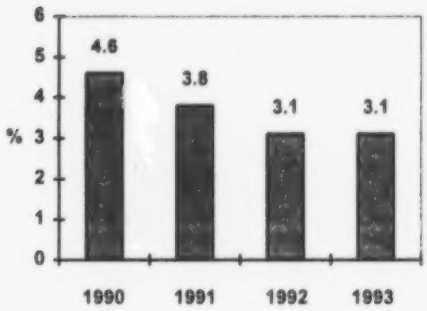



For three years, main schools had graduation rates approximately four percentage points higher than those of branch schools. This was not the case in 1993 when the difference was not significant.

### *Dual Accreditation*

In each of the four years, about one-sixth of the schools reported that they had, or were candidates for, accreditation in addition to that from the Commission.

**Net Effect of Dual Accreditation on Graduation Rates**

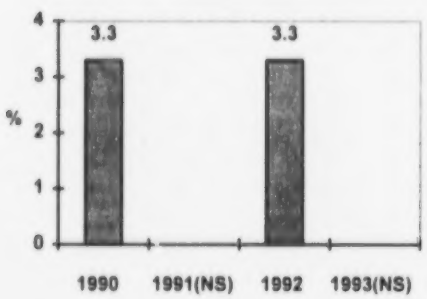



Schools with dual accreditation had graduation rates about 3.0 to 4.5 percentage points higher than those without dual accreditation.

### *Separate Facilities*

Some reporting schools have separate buildings, classrooms, or laboratories. For example, an aviation mechanics school might have a separate facility at an airport in addition to its regular classroom building. This is a different variable than whether the school is a main or branch school. About one in six schools reported having such facilities. Separate facilities may reflect an enriched instructional setting.

**Net Effect of Separate Facilities on Graduation Rates**

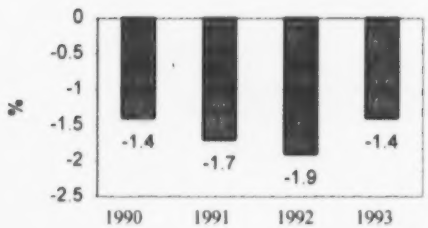



Schools with separate facilities had graduation rates that were higher by more than 3 percentage points than schools that did not have such facilities. This characteristic was not significant (NS) in 1991 or 1993.

***Percentage of Students Receiving Financial Aid***

The financial aid variables indicate the percentage of enrollment in a school receiving the aid indicated. The percentages range from 0-100. Across all schools, over half of all students received Pell grants and Federal Family Educational Loans during the past four years, and about one-fifth received Supplemental Loans to Students (SLS). The percentage receiving FFEL and SLS has been dropping slightly, while the percentage receiving Pell has been increasing.

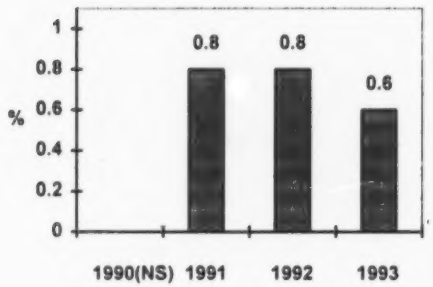
**Net Effect of the Percentage of Pell Grants on Graduation Rates**




For 10-point increase in the percentage of enrollment receiving Pell grants, the percentage of enrollment that graduated decreased about 1.4 to 1.9 percentage.

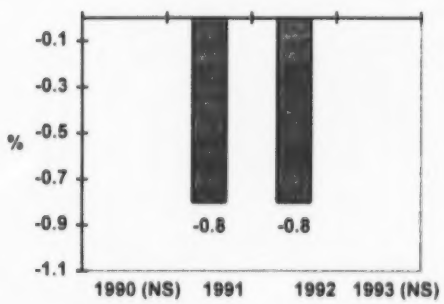
The results for the Pell variable do *not* mean that receiving Pell grants makes it less likely that students will graduate. Pell grants are given only to students whose income or whose family's income is below the poverty level, as defined by the federal government. Thus, a school with a high percentage of Pell recipients is a school with a high percentage of students whose families are functioning below the poverty level. What the Pell variable does reflect is that as the percentage of students living in poverty increases, graduation rates decrease. It is of interest, however, that the Pell variable does not have a significant effect on default rates. This will be discussed more fully in connection with the "Ability to Benefit" variable.

**Net Effect of Percentage of Students Receiving FFEL Loans on Graduation Rates**




Neither of the two variables were significant in 1990; but both were significant the next two years. at the same level of effect, but in the opposite directions. In 1993, FFEL was significant but SLS was not. As the percentage of students receiving Federal Family Educational Loans increased 10 points, graduation rates increased at a rate slightly less than 1 percentage point. As the percentage of students receiving SLS increased, graduation rates decreased.

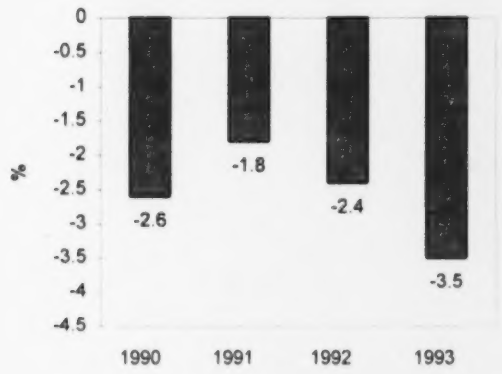
**Net Effect of Percentage of Students Receiving SLS Loans on Graduation Rates**



### *Average Program Length*

ACCSCT-accredited schools operate programs of lengths varying from just a few week to over 60 weeks. Graduation rates tend to be lower in longer programs.

**Net Effect of Program Length on Graduation Rates**

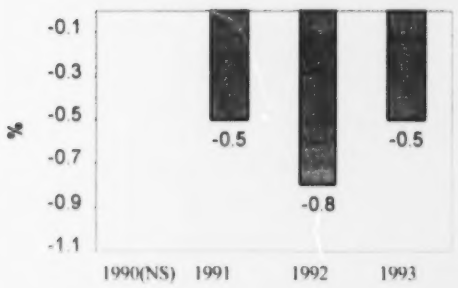



Schools with shorter programs (measured in weeks) have higher graduation rates than schools with longer programs. For every 10-week increase in program length, graduation rates decreased by about 2.0 to 3.5 percentage points.

### *Faculty Turnover*

Separate measures were created for full- and part-time staff turnover. *Turnover* was defined as "the number of instructors that left, divided by the total number employed during the school year." Turnover among part-time faculty was the only one of these measures to show a consistent relationship with graduation rates.

**Net Effect of Part-Time Faculty Turnover on Graduation Rates**




As turnover rates for part-time faculty increased 10 points, graduation rates decreased less than 1 full percentage point. The size of the effect is not large, but it is connected with graduation rates. A few departures can have a large effect on turnover rates.

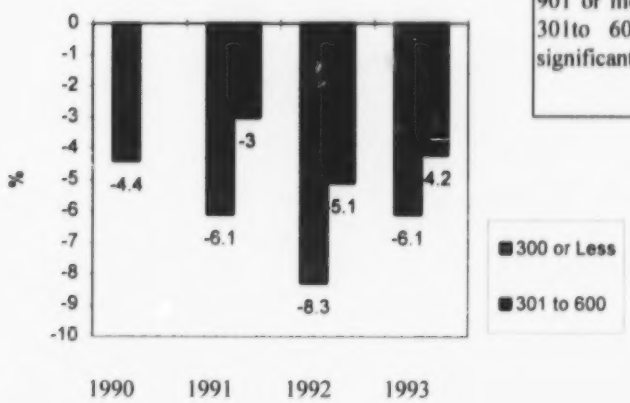
## Characteristics Related to Withdrawal

When students enroll during a given school year, they do not all graduate or withdraw during that school year. In each of the four years for which we have data, about 40% to 45% of both full- and part-time students continued their enrollment.

Thus, it was necessary to establish a definition of *graduation* that did not penalize schools for these continuing students. The definition adopted was "the number of students graduating, divided by the total number graduating and withdrawing." *Withdrawal* was defined as "the number of students withdrawing, divided by the number enrolled during a school year." Withdrawal is not simply the reverse of graduation because of the difference in definitions.

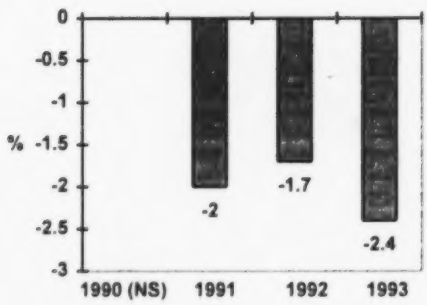
Many of the variables that influence graduation also influence withdrawal, but they are not identical. The following school characteristics had consistent significant influence on both graduation and withdrawal rates: enrollments of 300-or-less, enrollments of 301-600, dual accreditation, separate facilities, percentage of students receiving Pell grants, turnover among part-time faculty, and program length in weeks.

**Net Effect of Enrollment Size on Withdrawal Rates**



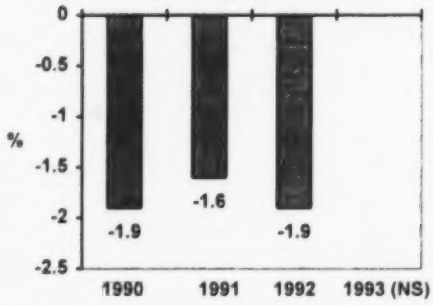

The chart represents percentage points in withdrawal rates in comparison to schools with enrollments of 901 or more. The difference in the effect of the 301to 600 enrollment size in 1990 was not significant.

**Net Effect of Dual Accreditation on Withdrawal Rates**



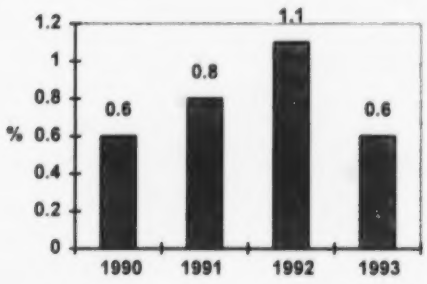

Withdrawal rates in schools with dual accreditation were significantly lower in all years except 1990.

**Net Effect of Separate Facilities on Withdrawal Rates**



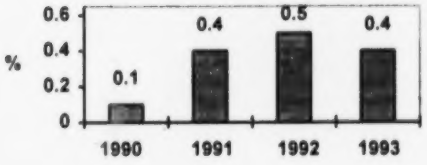

Withdrawal rates were significantly lower in schools with separate facilities except in 1993.

**Net Effect of Percent of Pell Grants on Withdrawal Rates**



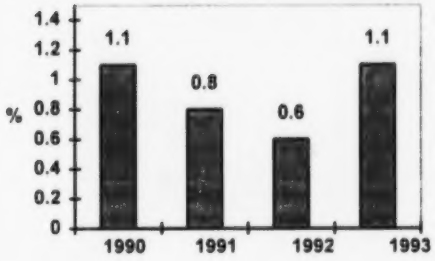

Withdrawal rates were significantly higher in schools with higher percentages of students with Pell grants.

**Net Effect of Part-Time Faculty Turnover on Withdrawal Rates**




Withdrawal rates were significantly higher in schools with higher part-time faculty turnover.

**Net Effect of Program Length on Withdrawal Rates**




Withdrawal rates were significantly higher in schools with longer program lengths.

For all these characteristics, their relationships with withdrawal were the reverse and about half the magnitude of their relationships with graduation. The lower effect upon withdrawal is partially due to the restricted range of the withdrawal variable; the average withdrawal rate is one-third the size of the average graduation rate.

Three characteristics, which did *not* have a consistent influence on graduation, did have such an effect on withdrawal:

- Turnover among full-time faculty (the effect of which was parallel to that of turnover among part-time faculty)
- Percentage of enrollment classified as "Ability to Benefit"
- Default rate

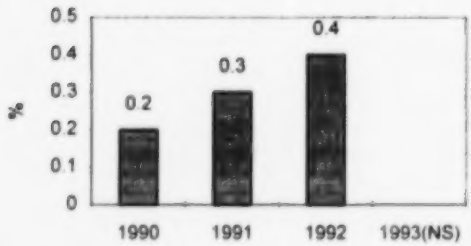
***Faculty Turnover***

Faculty turnover, particularly among part-time faculty, is associated with lower graduation rates and higher withdrawal rates. The magnitude of the effect is not as large as that of many of the other school characteristics. Because most schools do not have a large number of instructors, however, the addition or departure of a few can have a large impact on the turnover rate.

*Faculty Turnover (continued)*

For the four years presented in this report, the average number of full-time-equivalent instructors was slightly more than fifteen, and the turnover rate among both full- and part-time instructors was about 20%. This means that in an *average* school with fifteen instructors, a total of three instructors departed each year.

**Net Effect of Full-Time Faculty Faculty Turnover to Withdrawal**

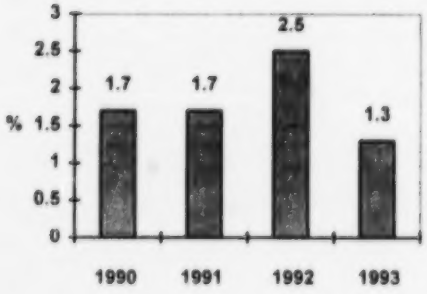



Withdrawal rates were significantly higher in schools with higher full-time faculty turnover except for 1993.

*Ability to Benefit*

The percentage of enrollment classified as Ability to Benefit (ATB) was one of the most interesting school characteristics examined in this analysis. The main effect of the ATB variable, to be discussed later, was found for default rates.

**Net Effect of Percentage of ATB Students on Withdrawal Rates**



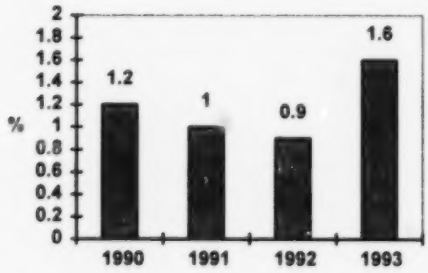

Withdrawal rates increased by 1.3 to 2.5 points for every 10-point increase in the percentage of ATB students.

***Default Rate***

The percentage of students who default on their Federal Family Educational Loans obviously cannot be a cause of withdrawal. Default occurs after withdrawal. It is included as an explanatory variable because we thought it might reflect certain characteristics of schools not captured by the other variables in our analysis. For withdrawal rates, it did. Default rate had a consistent relationship with withdrawal independent of all the other school characteristics examined.

The accuracy of the default rates published by the U.S. Department of Education has been questioned, and many schools accredited by the Commission have challenged their published rates and had them revised. In our analyses, however, we found the percentage of former students who default to be a fairly stable characteristic of the student population of a school. Default rates for the three most recent years for which we had data were intercorrelated, and highly significant relationships were found.

**Net Effect of Default Rates on Withdrawal Rates**

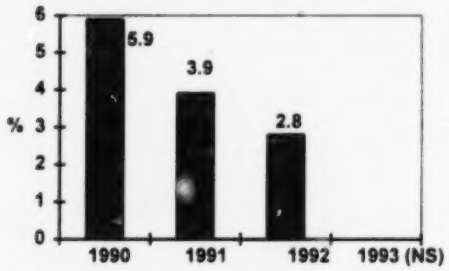



Withdrawal rates increased 0.9 to 1.7 percent for every 10 unit increase in the default rate.

## Characteristics Related to Training-Related Placement

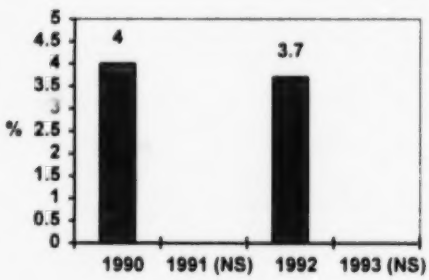
The economic benefits of studying occupational skills accrue primarily to graduates who obtain employment in jobs requiring the skills they learned in their programs. We have labeled the variable that measures the percentage of graduates who obtain such jobs Training-Related Placement (TRP). Over the four school years analyzed, three-fourths of the graduates available for employment found jobs in related fields. Unfortunately, TRP is the outcome with the fewest consistent relationships with school characteristics; however, relationships do exist between TRP rates and main schools, dual accreditation, and FFEL percentages.

**Net Effect of Main Schools on Training-Related Placement Rates**



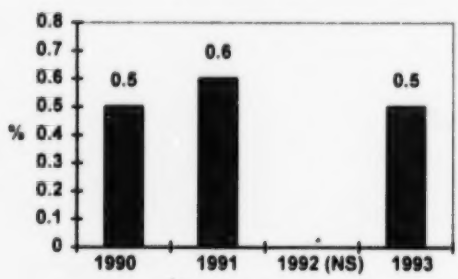

Programs that were offered at main schools prior to 1993 had higher rates of TRP than did programs offered at branch schools. The difference has been dropping, and in 1993 it was not significant.

**Net Effect of Dual Accreditation on Training-Related Placement Rates**




Programs at schools with dual accreditation had higher rates of TRP than did programs at schools without dual accreditation. The characteristic was not significant in 1991 or 1993.

**Net Effect of Higher FFEL Rates on Training-Related Placement Rates**




The percentage of students receiving Federal Family Educational Loans was associated with a higher training-related placement rate, however, the characteristic was not significant in 1992.

## Characteristics Related to Default

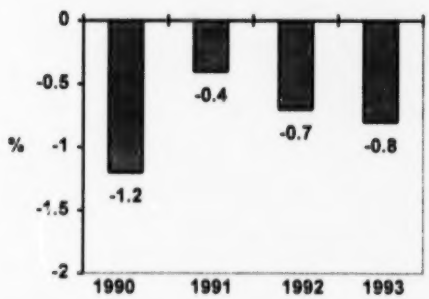
Probably more public attention is directed to default rates than to any of the other variables examined in this report. The existence of a time delay in the publication of default rates complicates analysis of this variable. Students must leave school and the grace period for repayment must pass before data can be collected. Consequently, our analysis always deals with rates based on students who left their schools and colleges at least two years prior to the period covered by the annual reports from these institutions.

As indicated earlier, default rates tended to be fairly stable across the four years analyzed. For school year 1990, we were able to match school reports and default rates. The results from the matched data were highly similar to the time-lagged results.

The school characteristics found to be associated with default rates are average program length, withdrawal rate, percentage of General Equivalency Diploma (GED) enrollment, percentage of enrollment receiving supplemental loans, change in school ownership, and percentage of ATB students.

The ***average program length*** (in weeks) is associated with default rates, just as it is with graduation and withdrawal. However, these regression coefficients are negative, which means that as program length increases, default rates decrease. It seems reasonable to expect that students who graduate from longer programs should earn higher wages and be in a better position to repay their loans. Longer programs are also more expensive and may attract students from more affluent families.

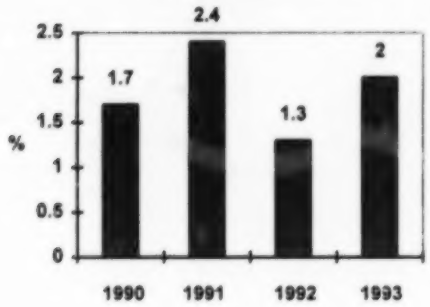
**Net Effect of Average Program Length on Default Rates**




Default rates were significantly lower among graduates of longer programs in four years.

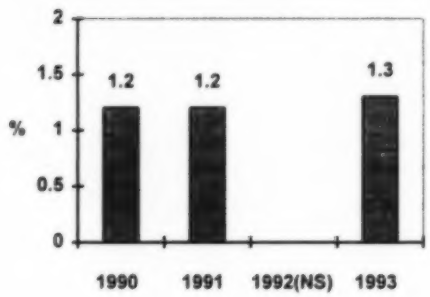
We reported earlier that default rates have an independent relationship with **withdrawal rates**. The reverse is also true. Even when other characteristics are held constant, schools with high withdrawal rates have high default rates.

**Net Effect of Withdrawal Rates on Default Rates**



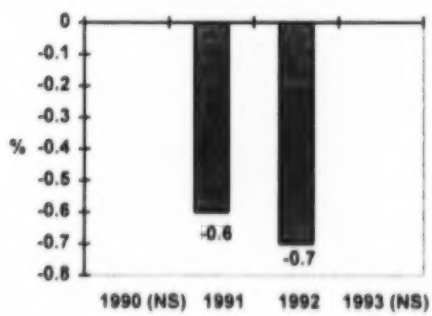

Default rates were significantly higher among schools with higher withdrawal rates in all four years.

**Net Effect of the Percentage of GED Students on Default Rates**




Default rates were significantly higher in schools with higher percentages of GED students in all years except 1992.

**Net Effect of the Percentage of Students with SLS on Default Rates**

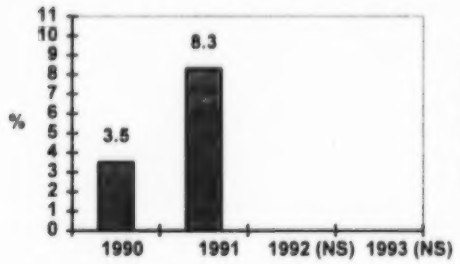



Default rates were significantly lower in schools with higher percentages of SLS students in 1991 and 1992. but not in 1990 and 1993.

***Change in Ownership***

Many of the school characteristics thought likely to be associated with poorer school performance (e.g. legal action pending, complaints under review) were not statistically significant or were significant in only one of the four years. Change in ownership was the only characteristic of this type to be significantly related to an outcome two of the four years. Again, it is important to keep in mind that the most recent default data are for the school year two years prior to the years of the annual reports.

**Net Effect of Change of School Ownership on Default Rates**



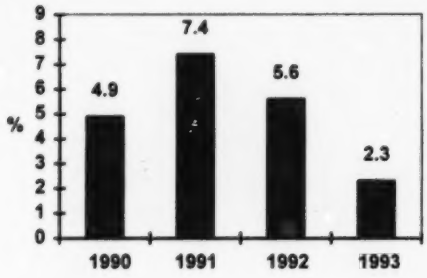

The relationship of change of ownership was significant in two of the four years; it was not significant (NS) in 1992 and 1993. In both 1990 and 1992, schools with changes in ownership had higher default rates than did schools that did not change ownership.

The reason why variables reflecting undesirable conditions are not consistently related to outcomes is, we think, that few schools report such conditions. Typically, less than 10% of schools report legal action pending, and less than 5% report complaints under review or changes in ownership. When the few schools reporting such conditions have very high or very low outcomes measures, this can have a distorting effect on the analysis. Consequently, in our discussion we have emphasized those variables that have tended to yield consistent results over the four school years.

*Ability to Benefit*

We noted earlier that the Ability to Benefit (ATB) variable had its strongest relationship with default rates.

**Net Effect of the Percentage on ATB Students to Default Rates**




Default rates increased at the rate of half a percentage point or more for every 1-point increase in the percentage of ATB students enrolled at a school in three of the four years analyzed. In 1993 the effect was about one-fourth of a percentage point.

These results were obtained when a special variable was entered into the analysis. The relationship between ATB and default is not simple. For 1990 to 1993, the shape of the relationship was curved, not straight. The middle of the curve explained most of the relationship. As the percentage of ATB students in a school increased, so did the default rates for that school. At the two ends of the curve; however, these relationships were reversed. Low rates of ATB were associated with high default, and high rates of ATB were associated with low default. This was not the case in 1993. The curved portion was not significant.

From 1990 to 1993, the percentage of ATB students enrolled declined, from 17% to 10%. This lower percentage -- and greater selectivity in the ATB students admitted -- may be altering the relationship between ATB and default.

In our judgment, the reason why ATB relates to default lies in student characteristics associated with dropping out of high school. ATB students have the ability to succeed, as measured by the test that classifies them; however, they may not have the personal qualities that enable them to benefit from classroom instruction. They are giving school another try, but if they encounter the same problems that caused them to drop out of high school, they may withdraw from the program. Feeling they have gained nothing, such former students are more likely to default on their loans.

***Ability to Benefit (continued)***

The question arises as to why the percentage-of-Pell-recipients variable does not also have a similar relationship with default, when it strongly depresses graduation and increases withdrawal. Our hypothesis is that the ATB variable is a better indicator of alienation from the mainstream institutions of our society, and it seems likely that such alienation would be associated with a tendency to default on loans. Even though the Pell variable indicates the percentage of students from a disadvantaged background, it is not associated with the percentage of high school graduates at a school. ATB, in contrast, has a high negative correlation with the percentage of high school graduates. If dropping out of high school reflects alienation and if alienation is associated with a tendency to default, the ATB variable appears to reflect this tendency.

The school characteristics that appear to be the best indicators of higher-quality school programs—dual accreditation, main school status, low turnover rates among faculty, and separate facilities—are not associated with default. This appears to be consistent with other studies that have concluded that it is the characteristics of individuals, not the institutions they attended, that influence whether loans go into default.

## Comparisons with Similar Programs

The findings for the schools and colleges reporting to the Accrediting Commission are consistent with other studies of the outcomes of many different educational systems. Student characteristics had a strong influence on the performance of these schools. However, they are not the sole influence. In the four years of data analyzed, we found certain school characteristics to have a significant effect on outcomes each year.

According to the definitions of *graduation* and *withdrawal* used in this report, almost two-thirds (63% to 65%) of the students leaving school graduated, and about one-fifth (20% to 22%) of the total enrollment withdrew. We could not locate any results from other postsecondary institutions that defined graduation and withdrawal rates in the same way they were defined for this report. The results we did find were generally based on a specific group of students (a *cohort*) that was followed for a specified period of time. The percentages of students that completed or withdrew from those programs were calculated based on the number that started the programs. The Accrediting Commission has adopted a similar definition for its future annual reports.

A follow up of a cohort of students of private career schools in Minnesota yielded a graduation rate of two-thirds, which is almost the same as the rate obtained from the definition used for this report. Another study that made a direct comparison of public and private postsecondary institutions found that proprietary institutions were more likely to retain their students until graduation.

The studies that are available suggest that the schools and colleges accredited by the Commission are graduating more of their students than comparable public institutions even though the Commission schools enroll proportionally more high school drop outs, members of minority groups, and students from disadvantaged backgrounds. (The sources for the data presented in this section are presented in the "Technical Notes" section).

Most institutions that provide occupational preparation define training-related placement, *TRP*, as "the number of program completers who obtain related employment, divided by the number of completers available for employment." Over the four years examined in this report, the number excluded from this calculation -- the number unavailable for employment -- has been a consistent 8% to 9%. This percentage has been about evenly divided between those continuing their education and those with other documented reasons for not seeking employment, such as health problems or a need to care for children or other family members. Each year less than one percent were unavailable because they entered military service.

In each of the four years, three-fourths of the graduates of accredited schools who were available for employment were reported to have obtained jobs related to the skills they had studied. To locate comparison results, we sought to identify all follow-up studies of postsecondary students entered into the literature between 1987 and 1993. We were unable to identify any national studies that had examined TRP, but we did find six state studies that examined the related employment of graduates of public vocational technical institutions. In five of these studies, the rates for students who had completed their programs in the mid-1980s ranged from 82% to 96%. In one state it was 61%.

If the one state is atypical, the public vocational technical schools appear to be doing slightly better than ACCSCT-accredited schools. If, however, more of the students of accredited schools actually complete their programs, and if these completers include larger proportions of high school drop outs, minorities, and economically disadvantaged students, then these slightly lower rates are certainly understandable.

**Definition of Outcome Measures**

The data for this report came from annual reports that are submitted to the Accrediting Commission on a school-year basis, defined as July 1 through June 30. The numbers reported in the various categories -- new enrollments, continuing students, re-entries, graduates, and withdrawals -- are the totals for the year. Information that traces a defined group of students from initial entry until exit, either through graduation or permanent withdrawal, is not available from these reports. The Commission has moved toward such a definition.

***Graduation Rates***

Defining *graduation* as "the number graduating, divided by the number enrolled" seriously underestimates graduation rates, primarily because many of the programs take two years to complete. The definition of *graduation* that was used is "the number graduating, divided by the total number graduating and withdrawing." This definition simply disregards the problem of "continuing students" for the current year. Some of these students will graduate, and some will withdraw in the next school year and will be included in the rate when they do so.

***Withdrawal Rates***

Withdrawal rates present less of an analytic problem. A withdrawal is a withdrawal regardless of when it occurs. Withdrawal rates were calculated by dividing the total number of students withdrawing during a school year by the total number enrolled during that school year. This definition, however, like that for graduation, is not based on a defined group of entering students. When the new definition for graduation rates is implemented, the definition of withdrawal will also be based on a defined group of entering students.

Because of "continuing students" and the definition of graduation rates adopted to allow for them, withdrawal rates are not simply the reverse of graduation rates. Since continuing students are not included in the calculation of graduation rates, the graduation and withdrawal rates do not total 100%. In each school year analyzed, about 40% to 45% of full- and part-time students neither graduate nor withdraw. Instead, they start during one school year and continue their studies into the next year. Consequently, not all variables found to have a significant relationship with graduation have a similar reverse relationship with withdrawal.

***Training-Related Placement***

Training-related placement (TRP) is a critical measure of the performance of schools and colleges whose primary mission is to teach specific occupational skills. We conducted some analyses using the definition of TRP approved by the U.S. Department of Education. This definition allows students who withdraw for related employment to be included in both the numerator and denominator of the rate calculation. This appeared to us to be potentially biasing the rate in a positive direction, so we calculated a separate rate that excluded those who withdrew from both the numerator and denominator.

The two rates differed very little. Entering the number who withdrew for related employment in both the numerator and denominator increased the TRP by only one percentage point. In the analysis presented in this report, therefore, we used the rate that included only those who graduated and were available for employment, which appeared to us to be less vulnerable to criticism that the calculation was biased in a positive direction.

To calculate TRP, we adjusted the number graduating by eliminating those who were unavailable for employment because they were continuing their education, entering the military, or had other documented reasons for not seeking employment, such as illness or pregnancy. The number excluded for these reasons had been consistent over the four years, averaging 8% to 9% of the total number of graduates.

***Default Rate***

The default rates for the 1990 and 1991 analyses were obtained from reports prepared by the U.S. Department of Education. These reports present the default rates for schools with thirty or more former students in default for the fiscal years that ended two years prior to the year in which the reports were issued. In 1992 and 1993, the default rates were obtained from the annual report forms filed by the schools, but these rates also were, as reported by the U.S. Department of Education, for the fiscal year two years prior.

**Sources for Comparison Statistics**

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**Training-related placement rates in public postsecondary institutions:**

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